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# An Exploration of Young Adult Online Behavior Versus Their Face-to-Face Interactions

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FACE-TO-FACE INTERACTIONS AND ONLINE BEHAVIOR

AN EXPLORATION OF YOUNG ADULT ONLINE BEHAVIOR VERSUS THEIR  
FACE-TO-FACE INTERACTIONS

A thesis project submitted in partial fulfillment  
of the requirements for the degree of  
Masters of Education

By

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B.A. Mathematics, Cedarville (College) University, 1998

2013  
Cedarville University

## FACE-TO-FACE INTERACTIONS AND ONLINE BEHAVIOR

### ABSTRACT

This non-experimental study examines the online behavior of young adults versus their face-to-face interactions. A social media survey was sent to undergraduate students of two private universities in the Midwest via e-mail. A total of 1,365 undergraduates participated in the survey. Analysis of the surveys found that 99% of the undergraduates considered themselves honest people. A chi square test comparing male and female responses revealed that honesty does not depend upon gender. A question of whether a person would say mean things to or about a person in a face-to-face encounter was compared with the question of whether a person would say mean things to or about a person through social media. The results were significant for both male and female responses. A question of whether a person flirts more through social media than face-to-face was compared to whether the respondents thought they represented themselves the same online as in the real world. The results were significant for both male and female responses. The research shows that young adults' behavior online differs from their face-to-face interactions.

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## **Chapter 1: Introduction**

Young adults are fervent communicators. They have an innate desire to constantly communicate with their closest peers. While that desire has not changed in the past twenty years, the method of communication has changed dramatically.

In the 1980's, a typical college student would communicate with their friends either in a face-to-face encounter or over a land-line telephone. Today, however, digital media has become central to the way young adults experience their peer relationships. Friends use mobile phones, social networking sites, and instant messaging platforms to “hang out” with each other around the clock (Giglietto, 2011). Digital media has become so prevalent in the lives of American young adults that being online is almost synonymous with having a presence on a social network site. A survey by the Pew Research Center's Internet & American Life Project in 2012 shows that young adults are more likely to use a major form of social media than any other age group. Fully 83% of online young adults are users of social media sites (Duggan & Brenner, 2013).

Digital media has given young adults the opportunity to communicate with their peers more with their thumbs than with their tongues. In fact, text messaging has become the most popular mode of communication among young adults in America. Among 18-24 year olds, cell phone ownership and text messaging are nearly universal: 95% own a cell phone and 97% of these cell owners use text messaging. Young adults create the largest number of text messages on a daily basis than any other age group. For example, 18-24 year olds send or receive an average of 109.5 text messages per day, which works out to more than 3,200 messages per month (Smith, 2011).



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Statistics show that young adults, specifically those in the college age group, are the most active users of social media. This presence of technology in the lives of young adults has added a new dimension to how they interact with each other in relationships. Young adults can choose to be one person in their face-to-face interactions and then choose a different online persona. To date, little research exists that explores how young adults online behavior contrasts with their face-to-face interactions.

Young adults' online activity, especially when it involves risky behavior, is a constant source of concern for college educators, employers, and the media at large. At-risk behavior via social media is a growing problem, because an increasing number of young people use cell phones and other interactive devices as their main form of social interaction (Hinduja & Patchin, 2011). As technology advances, three areas of concern emerge when exploring how young adults communicate online as opposed to their face-to-face interactions. These three areas are cyberbullying, sexting, and narcissism.

Cyberbullying can come in many forms. A young adult might e-mail, text, or tweet hurtful or intimidating messages to another person. Young adults might create a video, a web page or a profile on a social media site that makes fun of another person. These online actions often have costly offline consequences, even to the point of the victims committing suicide. In 2011, an exploratory study of cyberbullying with undergraduate students revealed that 54% of the respondents knew someone who had been cyberbullied and up to 34% had been cyberbullied themselves. The main avenues of bullying were cell phones, Facebook, and instant messaging (Walker, Sockman, & Koehn, 2011). Increased media attention to cyberbullying and online behavior emphasizes that many young adults are concerned about both the real and virtual world (D'Antona, Kevokian, & Russom, 2010).

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Rebecca Marinao, a 22-year old Canadian tennis player, announced in February of 2013 that she would be retiring from her professional tennis career (Bacon, 2013). She cited online social media abuse as the reason for her departure. Unpleasant interactions via Twitter pushed her to a point where she could no longer handle the negative comments, and they began interfering with her game. If she could not enjoy tennis, then she did not want to play anymore.

Likewise, in September of 2010, Tyler Clementi, a gay Rutgers University student, threw himself from the George Washington Bridge. He had been electronically spied on by his roommate, Dharun Ravi. Ravi had invaded Clementi's privacy and intimidated him through the use of social media. On Friday, March 16, 2013 Ravi was convicted on criminal charges of intimidating Clementi for being gay through the use of social media (Cloud, 2012).

The most recent form of cyberbullying to date has been coined "catfishing." The term catfishing started during the run of the MTV show "Catfish." It refers to a person who uses an online scheme to pretend to be someone else in hopes of luring a person into a relationship (Farley, 2013). The term catfishing became main-stream when Notre Dame line-backer and Heisman Trophy runner-up Manti Te'o created controversy over the supposed death of an online girlfriend, who later turned out to be fake. Manti Te'o argues that he did not make up a pretend online girlfriend and her death, but that he was a victim of catfishing. However, whether Manti Te'o was a victim or perpetrator is still unclear.

In 2012, Pew Research Center conducted a study on *The Tone of Life on Social Networking Sites*. According to the study, 49% of social-media-using adults have witnessed mean or offensive behavior on social networking sites. At some point, every young adult must learn to navigate social interactions with those who have a tendency to display inappropriate behavior. However, with the rise of social media, this mean behavior can take on a whole new

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form through cyberbullying. In fact, cyberbullying can be even more challenging than face-to-face bullying because of the sheer number of people who can witness and partake in the activity. It is no longer limited to a handful of perpetrators, as is the case in most face-to-face bullying.

Another area of concern with young adults and social media is sexting. Sexting is defined as sending, receiving, or forwarding sexually explicit messages, photographs, or images via cell phone, computer, or other digital devices (O'Keeffe & Clarke-Pearson, 2011, p.802). In 2008, The National Campaign to Prevent Teen and Unplanned Pregnancy surveyed teens and young adults regarding the sending and receiving of sexually suggestive texts and images. Thirty-three percent of young adults (ages 20-26) have sent or posted nude or semi-nude pictures or videos of themselves. Sending sexually suggestive messages (text, e-mail, IM) is even more prevalent, as 59% of young adults have sent or posted a sexually suggestive message (The National Campaign to Prevent Teen and Unplanned Pregnancy, 2008).

In 2011, Democratic U.S. Congressman Anthony Weiner faced criticism after the discovery that he had used Twitter, a social media website, to send a link of a sexually suggestive picture to a 21-year-old woman from Seattle, Washington (Kelly, 2011). Congressman Weiner admitted to sending sexually explicit photos and messages to other women as well. On June 20, 2011 Weiner formally submitted his letter of resignation from the U.S. House of Representatives. The FBI has also had its share of bad press in regards to sexting. In February of 2013, the media released quarterly reports involving a “rash of sexting cases” in which employees used their government-issued devices to send lurid texts and nude photos around the office (Zamost & Griffin, 2013).

Sending inappropriate pictures or texts to one another without leaving evidence has become easier with the advancement in technology. In September of 2011, Apple launched an

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app (application software) called Snapchat, which allows the user to send a photo. Once the recipient taps on the image to view it, the message will disappear after a set period of time, up to 10 seconds. The self-destruction feature allows users to share quick moments without having to worry about stored files (Lynley, 2013). Another feature of this app is that it does not leave a permanent trail, or, in other words, a digital footprint.

As sexting and cyberbullying gain media attention, the question that remains is whether young adults act the same online as they would face-to-face. Would young adults that send sexually inappropriate texts say the same thing in a face-to-face encounter? Are those who are involved in cyberbullying carrying their behaviors over to the real world? The anonymity of the virtual world gives people the opportunity to become someone different.

In light of this, the third behavioral concern that is increasing among young adults today is narcissism. Narcissism is associated with the need for admiration and an exaggerated sense of self-importance (Mehdizadeh, 2010). Narcissists seek attention and are obsessed with their physical appearance (Ong, Ang, Ho, Lim, Goh, Lee, & Chua, 2011). Young adults who display narcissistic tendencies become overly focused on how their profile appears to the digital world. Social networking sites serve as platforms for narcissistic behavior because they allow almost full control over self-presentation. This enables the users to be strategic in how their information, pictures, or videos are presented. Most college students struggle with their self-confidence and appearance. As young adults' social lives become centered around digital images, many young adults can become consumed with their online appearance. Among social network users, 17% have edited photos to make themselves look better before sending or posting them online (Rideout, 2012).

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Cyberbullying, sexting, and narcissistic tendencies are on the rise as a result of the advancements in technology. However, little research to date compares off-line and online behavior. The virtual world of social media gives young adults an opportunity to deviate from their true-self. This study will explore whether young adults represent themselves the same online as they do in their face-to-face interactions, or whether they take advantage of this opportunity to become a different person online.

### **Definition of Terms**

**Social Media Site** – This term refers to any web site that allows social interaction. Examples include, but are not limited to: blogs, video sites such as You Tube, gaming sites, and social networking sites such as Facebook, Instagram, and Twitter (O'Keeffe & Clarke-Pearson, 2011).

**Cyberbullying** – This term refers to the deliberate use of digital media to communicate false, embarrassing, or hostile information about another person (O'Keeffe & Clarke-Pearson, 2011, p.801).

**Catfishing** – This term refers to the phenomenon of internet predators who use an online scheme to pretend to be someone else in order to trick people into emotional/romantic relationships over a long period of time (Farley, 2013).

**Sexting** – This term can be defined as sending, receiving, or forwarding sexually explicit messages, photographs, or images via cell phone, computer, or other digital devices (O'Keeffe & Clarke-Pearson, 2011, p.802).

**Digital Immigrants** – This term refers to people who have not grown up with technology (Van Vooren & Bess, 2013).

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Digital Natives – This term refers to people who have grown up with technology (Van Vooren & Bess, 2013).

Internet – This term refers to an electronic communications network that connects computer networks and organizational computer facilities around the world (Internet, 2013, para.1).

Electronic Mail – This term refers to a method of sending messages electronically from one computer to another (“E-mail”, 2013).

Facebook- This term refers to the name of a social networking service and website that launched in 2004 (Ross et al, 2009).

Narcissism – This term is defined as a pervasive pattern of grandiosity, need for admiration, and an exaggerated sense of self-importance (Mehdizadeh, 2010, p.358).

Twitter – This term refers to an online social networking service and microblogging service that enables its users to send and read text-based messages of up to 140 characters, known as "tweets" (Dijck, 2012).

Tweet – This term refers to a message sent using Twitter (Dijck, 2011).

Snapchat – This term refers to a free photo-sharing application that launched in September 2011 by Apple, Inc. (Lynley, 2013).

Digital Footprint – This term refers to the collective, ongoing record of one’s internet activity. When an internet user visits various web sites they leave behind evidence of which sites they have visited (O’Keeffe & Clarke-Pearson, 2011, p.802).

Chat rooms – This term refers to a virtual space in which Internet users can “talk” to each other in real time (Rojas, 2001).

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Cyberstalking – This term refers to an inappropriate, unwanted social exchange initiated by a perpetrator via online or wireless communication technology and devices (Piotrowski & Lathrop, 2012, p. 533).

iDisorder – This term refers to a psychological malady that is a negative relationship between technology use and psychological health (Rosen, Whaling, Rab, Carrier, & Cheever, 2013, p.1243).

### **Statement of the Problem**

The social media world is exploding. Adolescents and young adults are being exposed to the digital world at an ever increasing rate. Few studies have examined how this generation of young people portray themselves online versus their face-to-face interactions. When young adults begin to have a different persona online than they do in real life, the possibility to engage in cyberbullying, sexting, and narcissistic behavior may increase. All of these behaviors can be destructive. Surveying young adult perception of their online behaviors as opposed to their real world conduct would contribute to the knowledge of the subject. It also could help young people identify with the fact they act differently online then they do in the real world, which might aide in preventing some of these destructive consequences. Finally, it would serve as a guide to others on how to better address integrity online and curb some of these bad behaviors.

### **Scope and Study of Delimitations**

In this research, the population sample will consist of undergraduate students from two private universities in the Midwest. The combined undergraduate sample of both universities totals approximately 6,000 students.

### **Significance of Study**

Adolescence and young adulthood is a time when peers become increasingly important, and those who are immersed in social media need to learn how to navigate their friendships in the digital world as well as their face-to-face interactions. This study will reveal how young adults see themselves as they interact online with their peers. It will also reveal if they act differently online than they do in person. Adults who have constant interaction with adolescents and young adults need to understand the importance of educating them in how to have authentic relationships with integrity both online and face-to-face.

### **Methods of Procedure**

#### **Research Question**

How does young adult online behavior differ from their face-to-face interactions?

#### **Process**

The type of research in this study is non-experimental. Christensen and Johnson (2008) define non-experimental research as research in which there is no manipulation of the independent variable and no random assignment to the groups by the researcher. Christensen and Johnson (2008) classify one type of non-experimental research as causal-comparative. In this causal-comparative research, the relationship between one or more categorical independent variables (male and female young adults) and one or more quantitative dependent variables will be studied.

The main tool used to carry out this non-experimental, causal-comparative study, is a purposive sampling of undergraduate students from two separate universities in the Midwest



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(Christensen & Johnson, 2008). The sample has been chosen because of the specific characteristics of the individuals. Both samples fall into the category (young adults) to be researched.

Each university will send out a mass e-mail to their undergraduate students asking them to participate in a volunteer survey about social media. The e-mail will contain a link to Survey Monkey, the site where the survey will be taken. The survey will consist of eleven questions to be answered via Survey Monkey. This will include one categorical question (gender), one quantitative question (age), one multiple choice question, and eight questions with answers to be chosen based upon a 4 point Likert response scale. This survey will eliminate the not sure/undecided/neutral category in order to force the participants to think through the question and pick a response.

The data to be collected from the survey is quantitative. The data analysis part of this research will include the use of both descriptive and inferential statistics. Heiman (2001) defines descriptive statistics to be a mathematical procedure for organizing, summarizing, and describing the important characteristics of a sample of data. Measures of central tendencies are a part of descriptive statistics. These measures summarize the location of a distribution of scores on a variable (Heiman, 2001). In this study, the measure of central tendency that will be used to analyze the data will be the mode, or the most frequent response.

Heiman (2001) defines inferential statistics as the statistical conclusions that are made about a population based on sample data. This study will use nonparametric, inferential statistics as part of making conclusions about the population based on the data from the survey.

Nonparametric statistics are inferential procedures in which the data may be nominal or ordinal

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(Heiman, 2001). The survey to be given to each university contains both nominal and ordinal questions.

The chi square test will be the nonparametric procedure used to determine whether the frequencies in each category in the sample represent those frequencies in the population (Heiman, 2001). This test is best used with nominal variables. Nominal variable responses do not indicate an amount, but rather the category that the participant falls into (Heiman, 2001). Using the data from the survey, the researcher will determine what category the young adults fall into (agree/disagree, strongly disagree/strongly agree). The first step in using the chi square test is to determine the statistical hypotheses. In this study two hypotheses will be made about the sample population.

1. Young adults act differently online than they do in person.
2. Honesty is not dependent upon gender.

In order to test the hypotheses using the chi square method, the null hypotheses will be:

1.  $H_0$ : Young adults actions online are the same as their face-to-face actions.
2.  $H_0$ : Honesty is not dependent upon gender.

Once the data is collected from the survey, the researcher will begin analyzing the data using the two null hypotheses.

## **Chapter 2: Literature Review**

### **History of Social Media**

The first electronic digital computers were the size of a large room (Rojas, 2001). Today, a smartphone has all the capabilities of a personal computer and can fit into a person's pocket. The computer has evolved at a rapid rate since the 1940s. At that time, when the first digital

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computers were introduced, their main functions were programming and solving advanced mathematical concepts. From the time the first digital computer was working until people could communicate over the computer to one another with one another took about 30 years.

The roots of today's electronic mail (e-mail) and the Internet began with a research-funded organization within the U.S. Department of Defense called the Advanced Research Projects Agency (ARPA). In 1969, ARPA developed ARPANET for the purpose of carrying command and control information during a nuclear event. During this time, messages through the computer were limited to users of the same computer. In 1972, Ray Tomlinson wrote the first system to provide distributed mail service across a computer network using multiple computers (Rojas, 2001). This was the earliest form of e-mail. The combination of Tomlinson's development of e-mail and ARPANET led to advancements in technology that would allow more groups other than the military to use e-mail.

In the 1980s, the Internet's use was extended to universities, government contractors, and research institutions. Then, in 1990, ARPANET was shut down and many other government agency networks became the backbone of today's Internet. Finally, in 1991, the U.S. government announced that starting in 1995, the government would no longer subsidize the Internet (Rojas, 2001). In 1995, 16 million people representing 0.4% of the world population, used the Internet. By March of 2013, that increased to 2,749 million Internet users, representing 38.8% of the world population (Internet World Stats, 2013).

As the Internet and e-mail were developing as ways to connect people around the world, chat rooms were simultaneously gaining momentum. Doug Brown and David R. Woolley developed the earliest chat system at the University of Illinois in the 1970s (Rojas, 2001). Students could post offline messages to other students. However, in 1975, online messages

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became popular tools for students, enabling them to communicate with each other in virtual classrooms. Then, in 1978, Ward Christensen and Randy Seuss in Chicago developed CBBS, the Computerized Bulletin Board System. CBBS allowed users to post public messages and then respond to their own posts. Once the Internet became commercialized, chat rooms became web-based. A chat room is a real-time online interactive discussion group (Chat Room, 2013). Today, people use chat rooms not only for conversations, but also for other purposes, such as attending live moderated events, online seminars, and lectures.

Online chat is one form of synchronous communication. Synchronous communication occurs when participants simultaneously use software or a website that allows concurrent conversation (Dolev-Cohen & Barak, 2013). Another form of synchronous communication is known as Instant Messaging (IMing). IMing differs from chat in that while chat rooms host a group of users, Instant Messaging is private communication with one or more users found in one's friend or buddy list. Instant Messaging's popularity began in the middle of the 1990s with the launching of the ICQ (I Seek You) programming. A company called Mirabilis released ICQ in November of 1996, allowing users to send real-time instant messages over the Internet. In June of 1998, America Online acquired Mirabilis. Windows Live Messenger followed in 1999, and Google Talk launched in 2005 (DeHoyos, 2013).

E-mail, on-line chat rooms, and IMing provided the earliest avenues for people to begin interacting socially via the Internet. In addition to these inventions, "Web 2.0" is another important term in the history of social media. The term first surfaced in 1999 and was used to describe web sites that employ technology in a more interactive way than simply the passive viewing of content (Park, 2013). Most Web 2.0 platforms began as the exchange of creative or

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communicative content among friends. Examples of Web 2.0 platforms are blogs, wikis, video sharing sites, and social networking sites.

As computer users moved more of their everyday activities to online environments, Web 2.0 gradually became more social. Merriam-Webster defines social media as forms of electronic communication through which users create online communities to share information, ideas, personal messages, and other content (“Social Media”, 2013 para. 1). Social media has many different subsets. One subset of social media is called User Generated Content (UGC). UGC sites support creativity and promote the exchange of amateur or professional content. Examples of UGC sites are YouTube, Flickr, Myspace, GarageBand, and Wikipedia.

Other social media subsets include Play and Game Sites (PGS) and Trade and Marketing Sites (TMS). Online games such as FarmVille, CityVille, and Angry Birds are examples of PGSs. TMS, on the other hand, exist for the purpose of exchanging or selling products. Some examples are Amazon, eBay, Groupon, and Craigslist.

The last example of a social media subset is Social Network Sites (SNS). These sites promote interpersonal contact between groups or individuals. Examples include Facebook, Twitter, LinkedIn, Instagram, Pinterest and Google+. Under the umbrella of social media, this research will focus on the category of Social Network Sites. More verbal interactions occur on Social Network Sites than on any other social media sites. A more formal definition of a social network site is a “web-based service that allows individuals to (1) construct a public or semi-public profile within a bounded system, (2) articulate a list of other users with whom they share a connection, and (3) view and traverse their list of connections and those made by others within the system” (Boyd & Ellison, 2007, p.210). This report will highlight some of the major social media sites that have launched in the past and have had a large following. See Figure 1.

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According to the definition above, the first social network site launched in 1997 under the name SixDegrees.com. The name Six Degrees originated from the concept of six degrees of separation- that all people are connected to one another by no more than six separate individuals. Six Degrees allowed users to list family members, friends, and acquaintances both on the site and externally. Users could send messages to people in their first, second, and third degrees of connection. Six Degrees attracted millions of users, but its notoriety failed to last, and in 2000 the site closed. Its founder believed that, while people were flocking to the Internet, most did not have an extended network of friends. In this way, Six Degrees was ahead of its time (Boyd & Ellison, 2007).

Friendster was the next big social network site, launching in 2002. Friendster was designed to help friends-of-friends meet, restricting users from viewing profiles of people who were more than four degrees away (Boyd & Ellison, 2007). However, the site encountered social and technical difficulties as Friendster's population surged. Friendster's servers and databases could not handle the massive overload and this frustrated the users. Additionally, Friendster began to restrict user activities as users began to make up fake profiles called "Fakesters."

As Friendster's popularity started to wane due to user frustration, another social network site began making waves in the social media culture. Myspace was founded by Chris DeWolfe and Tom Anderson in August 2003. Both were members of Friendster and saw the potential in social media. Myspace began locally in Southern California and quickly started attracting artists, musicians, and actors. Myspace let its users control their pages and post what they wanted to post. In a sense, each profile served as a blank canvas for the owner. Myspace gave its users "their space" to do whatever they wanted to do with it. Myspace exploded from 2005-2006, as user profiles jumped from 2 million to 80 million (Random History, 2008). Since its official

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launch in 2004, Myspace has played a role in murder cases and political scandals. The site also “minted internet celebrities, launched musical careers and helped inspire an entire industry based around Web 2.0” (Stenovec, 2011, para. 2). According to Pew Research Center, in 2011, 42% of Myspace users were 23-35 year olds.

Around the same time that Myspace launched, Facebook was just beginning to emerge as another social networking site. In 2004, from their dorm room at Harvard University, Mark Zuckerberg and his roommates developed the online social network where users could create a personal profile, add other users as friends, and exchange messages. At first, Facebook was limited to Harvard students. It then opened up to other Ivy League schools, universities throughout the United States, and eventually to high schools. On September 26, 2006, Zuckerberg made Facebook available to everyone age 13 and older with a valid email address. As of September 2013, 728 million people use Facebook daily (“Facebook”, 2013).

In 2006, the next big social media site launched. Twitter, an online social networking and microblogging service, was co-founded by Noah Glass and Jack Dorsey. Twitter’s site enables its users to send and read text-based messages of up to 140 characters, known as “tweets.” The service rapidly gained worldwide popularity. As of June 2011, 26% of 18-22 year olds use Twitter (Hampton, Goulet, Rainie, & Purcell, 2011).

Social media has become a way of life for the majority of today’s young adults. In 2013, Dijck wrote:

Teenagers and young adults can no longer imagine organizing their social lives without Facebook at its center; news organizations have accepted Twitter as one of their principal sources of breaking news; a pop band that ignores the potency of YouTube’s viral videos might as well denounce it’s fan base; Flickr and Facebook

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have become global distribution centers of digital snapshots; and few students would still be able to write a term paper without access to Wikipedia – or Google Scholar or Search, for that matter. (p.23)

Young adults' interactions with technology online can both positively and negatively impact their face-to-face behavior in a variety of ways.



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*Figure 1.* Highlights of major social media site launches.

### **Deception with Social Media**

The invention and advancement of social media technology has enabled the primary mode of interpersonal communication to no longer be face-to-face. For years, e-mail and instant messaging only supplemented face-to-face communication and telephone conversations. Today, however, text messaging is the most popular mode of communication for young adults (Smith, 2011).

Facial expressions, tone of voice, and nonverbal cues are all present in face-to-face conversations. On the other hand, social media (IMing, Facebook, Twitter, texting, etc.) is void of all these qualities, and this can often lead to misinterpretation and miscommunication of the written text. Social media can also give a person the opportunity to say things they might not say in a face-to-face encounter.

Online interpersonal deception has become an important research issue. To date, little empirical research exists examining the extent of deception over various communication modalities other than face-to-face (Zimbler & Feldman, 2011). So far, the research that has been conducted shows that online deception is occurring more than face-to-face deception.

Whitty & Carville (2008) examined 150 undergraduate students in relation to how likely they were to tell a lie. They reported that the students were most likely to tell lies about themselves to people not well known to them, first in the form of an e-mail, then in a phone conversation, and finally, face-to-face. Participants were most likely to tell lies about other people to those they were closest to, but the mode of communication was not significant.

Mapp et al. (2008) surveyed 365 undergraduate students to examine the relationship between deception and Facebook. They found that the more time the students spent on Facebook (acquiring friends and accounts), the more likely they were to perceive others as deceptive. They

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also found that the more people misrepresented themselves on Facebook, the more they thought others misrepresented themselves.

In a similar study, Lu (2008) found that the more Internet dependent an undergraduate student was, the more likely they were to be deceptive online. This is in line with Caspi & Gorsky (2006) who showed that more frequent Internet use was associated with greater online interpersonal deception. Additionally, Zimbler & Feldman (2011) found that people are more deceptive over communication modalities (email, IM) than face-to-face.

Finally, Whitty et al. (2011) examined deception across different modes of communication (including face-to-face) with undergraduate students. The results showed that students told planned lies most often through text messaging, not strangers or distant friends, but to people the participants felt closest to. As social media has become more prevalent in everyday life and as the opportunity to deceive through different forms of social media increases, the opportunity to use social media for destructive behaviors has also increased.

### **Cyberbullying**

Bullying is carried out by an individual, or group of individuals, and is repeated over time in order to hurt, threaten, or frighten another individual, with the intention to cause distress (Boulton, Lyoyd, Down, & Marx, 2011). Traditional bullying has always existed. Thirty years ago, bullying and aggression primarily occurred as direct physical or verbal attacks. In the past, the term “bully” may have conjured up an image of a larger, male, elementary student verbally or physically abusing someone smaller than himself. Today, however, the terms and methods of bullying have taken on new forms and frequencies.

Unlike traditional bullying, cyberbullying can be completely anonymous and does not require a physical location or a face-to-face encounter (Schenk & Fremouw, 2012). The power in

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cyberbullying lies in its anonymity. Cyberbullying gives young adults the chance to behave as one person in face-to-face interactions and then take on a different persona when online. With the rise of social media and technology, particularly smartphones, cyberbullying can occur anytime and anyplace and reach a large audience quickly. Cyberbullying is a growing problem and, as a result, 49 states have adopted or are in the process of adopting laws against cyberbullying (Hinduja & Patchin, 2013).

Cyberbullying can take on many different forms, recognizing them is important, in order to prevent it from affecting the lives of not only young adults, but also any who participate in the act of cyberbullying. Li (2007) outlined seven different kinds of cyberbullying: flaming, online harassment, cyberstalking, denigration, masquerading, outing, and exclusion. Flaming refers to the electronic transmission of vulgar and rude messages, while online harassment is the one-sided, repeated sending of messages to a target, online or through texting. Cyberstalking involves threats and intimidation. Denigration involves sending cruel messages and gossip about someone, for example, websites where students write untrue, derogatory comments about other students. Masquerading is creating a false identity and sharing information with the intent to damage a person's reputation or relationship. Finally, outing is the sharing of private information with someone, and exclusion involves intentionally leaving someone out of a group online.

Each of these forms of cyberbullying is harmful to both the victim and the perpetrator. Research is necessary to identify the prevalence of cyberbullying in a college sample, how this victimization affects this age group, and what coping strategies they can utilize to prevent this behavior (Schenk & Fremouw, 2011).

To date, little published research explores cyberbullying within the undergraduate age group. Cyberbullying is very relevant for this age group, since most students have just completed

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high school, where cyberbullying is prevalent, and they are also more independent from parental influences (Schenk & Fremouw, 2011). Additionally, college students are a population that rely heavily on technology, but have been overlooked in the cyberbullying research. Dilmac (2009) sampled 666 undergraduates at Selcuk University in Turkey. Of the sample, 22.5% reported engaging in cyberbullying at least one time and 55.3% reported being victims at least one time. Likewise, a study done in New Jersey with 471 undergraduates, reported prevalence rates of 10% for cyberbullying victims (Kraft & Wang, 2010).

Fewer studies have looked at gender differences in cyberbullying. Snell & Englander (2010) surveyed 213 college students from Bridgewater State College (Massachusetts) and found that females are more frequently involved in cyberbullying related behaviors, both as victims and perpetrators. Females reported that they were more often victimized by rumors and lies online (69%) as opposed to males (44%). Schenk & Fremouw (2011) surveyed 799 college students and found that 8.6% were victims of cyberbullying. Females (8.7%) reported being cyberbullying victims slightly more than males (8.4%).

Walker et al. (2011) explored cyberbullying on the university campus to examine how undergraduates experience cyberbullying and the role that gender plays in cyberbullying at that level. The study also investigated what forms of technology undergraduates use to receive or perpetrate bullying and how often it occurs. Researchers analyzed data from a sample of 120 undergraduate students (70 female and 50 male). Of the sample, 34% had personally experienced cyberbullying, and 54% knew someone who had been cyberbullied. One hundred percent of the male respondents knew someone who had been cyberbullied. Of the items listed in the survey, Facebook (64%), Cell Phones (43%), and AIM (43%) were the most frequent technologies used.

### **Sexting**

When nude or semi-nude digital images are used to harass, embarrass, or intimidate another person, then sexting becomes a form of cyberbullying. Sexting among adolescents in middle school and high school has become a hot topic for the media. Numerous stories describe teenagers taking explicit photos of themselves and sending them to a boyfriend or girlfriend, eventually getting caught when the photos become public knowledge. These actions have severe consequences. Youth involved in sexting can jeopardize their futures, as those images become available to family members, academic institutions, and even potential employers.

Possession and production of child pornography is illegal. According to the National Conference of State Legislatures, all 50 states have laws prohibiting the production, possession or distribution of images depicting sexually explicit activities involving a child. In 2012, at least 13 states introduced bills or resolutions aimed at sexting.

To date, little research has examined undergraduates and sexting, perhaps because sexting among consenting adults is not a crime, and most undergraduates are adults. Benotsch et al. (2013) surveyed a sample of 763 young adults (ages 18-25) online. Overall, 44% of the respondents reported engaging in sexting. Men (43.8%) and women (44.7%) reported comparable sexting rates. Among those who engaged in sexting, 62% had both received and sent at least one sexual image, 32% had received one sexual image, and 6% had only sent a sexual image. Individuals who participated in sexting were significantly more likely to report recent use of drugs and alcohol. The results also associate sexting with high-risk sexual behavior.

In the survey that Snell & Englander (2010) conducted, they found that 27% of the girls said that they had been coerced, blackmailed, or threatened into sending a nude photo of

themselves. This finding suggests that bullying may cause a percentage of sexting among young adults.

In a similar study in 2010, an online survey found that nearly two-thirds of undergraduates had sexted nude or semi-nude pictures of themselves, mostly to their boyfriends or girlfriends. The primary motivations for this group were sexiness, initiation of sex, or self-expression (Henderson as cited in Wiederhold, 2011).

Research by the University of Rhode Island faculty (2011) found that nearly 80% of college students have received sexually suggestive messages, and more than half have received sexually suggestive images via text messaging. Seventy-three percent of the sexts were sent to a relationship partner. Seventeen percent said that they had forwarded a sexually explicit message that they had received to other people.

The research available for young adults in relation to sexting is limited. Of the research available, the majority of it involves sexually explicit photographs. While the percentages in this research seems high, one could speculate that including sexually explicit texts in the research would make those percentages considerably higher.

### **Narcissism and Social Media**

Narcissists crave the attention and approval of others. They also tend to seek out external sources of admiration and attention to help maintain their self-esteem (Bergman et al., 2010). Social Network Sites provide an ideal outlet for narcissists. These sites allow narcissists to display vanity, self-promotion, and a large number of superficial friendships. For example, Facebook users upload their own photo for their profile and manage their own “status updates.” Furthermore, anyone with a Facebook account can view the number of friends a person has. Likewise, Twitter users answer the question “what are you doing?” in “tweets” consisting of 140

words or less. The belief in an audience interested in following one's moment-to-moment tweets suggests egocentrism and self-importance (McKinney et al., 2012).

Pinksey & Young (2009) reported in *USA Today* that narcissistic tendencies are on the rise. In the past couple of years, research has looked for a connection between narcissism and SNS usage (Twenge & Campbell, 2009; Buffardi & Campbell 2008; Bergman et al., 2010; McKinney et al., 2012). Buffardi & Campbell (2008) surveyed 128 undergraduates and found that narcissists portray themselves on social networking sites similarly to how they behave offline. They also found that more modest, less self-centered individuals in real life do not appear to promote themselves to the same degree that narcissists do on the Web. Their research found that narcissism predicted higher levels of social activity in the online community and more self-promoting content in on social networking web pages. This is consistent with the research of McKinney et al. (2012), as well. Higher levels of narcissism were associated with a larger number of Facebook friends and a higher number of self-focused tweets. Bergman et al. (2011) and Gentile et al. (2012) also reported an association between narcissism and the self-reported number of friends.

### **Harmful Effects**

Cyberbullying, sexting, and narcissism can have long-lasting and harmful effects on the victims of these behaviors. Both cyberbullying and sexting can have legal consequences (National Conference of State Legislatures, 2011 & 2012) and all three behaviors can have emotional and behavioral ramifications.

To date, the majority of research has studied children and adolescents to discover the harmful effects of cyberbullying. Schenk & Fremouw (2012) conducted the first study on college students using a standardized assessment of psychological symptoms (i.e., SCL-90). College



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students victimized by cyberbullying most frequently felt frustrated, stressed, sad or hurt, angry, and/or experienced difficulty concentrating. The victims scored high on psychological subscales of depression, anxiety, and paranoia. They also endorsed more suicidal behaviors than the control group. The coping strategies of the victims were consistent for both males and females. Both sexes avoided their peers, stopped socializing, got revenge, or told someone (Schenk & Fremouw, 2012). Female behavioral responses to cyberbullying included avoiding any form of social media, while male responses involved drinking alcohol or using illegal drugs.

Sexting between young adults does not carry the same legal risks as sexting among underage individuals. However, sexting among this age group still has harmful effects. Some of these effects include mental health problems, embarrassment, and public dissemination of sexual photos (Benotsch et al., 2012). Benotsch et al. (2012) reported that, of the sample of undergraduates involved in sexting, these individuals were more than twice as likely to report multiple partners and unprotected sex. Fourteen percent of their sample reported having sex with a new partner after sexting with them first. Also, those who sexted were significantly more likely to have multiple sexual partners, higher rates of sexually transmitted infections, and an association with substance abuse.

While narcissism is not a crime, it also has harmful effects, both for the narcissist and for those in a relationship with that person. Buffardi & Campell (2008) state that those who are in a dating relationship with a narcissistic individual can suffer from aggressive behavior, psychological control, infidelity, and lower levels of commitment. Gentile et al. (2012) also report that narcissists show low commitment in relationships and continually search for alternative partners, exploiting them for temporary gains in esteem. Research conducted with

narcissism at the undergraduate level reports that narcissism is consistent with a large number of shallow relationships (Buffardi & Campbell, 2008; McKinney et al., 2012).

While most of the harmful effects of narcissism lie with those who are in a relationship with a narcissist, harmful effects exist for those who have the disorder. The Mayo Clinic reports (2011) that people with a narcissistic personality disorder can have depression, suicidal thoughts or behavior, relationship difficulties, and problems at work or school. Narcissists may also have problems with substance and alcohol abuse.

Moreover, narcissism is not the only psychological disorder associated with social media. The term “Facebook depression” has surfaced in the past couple of years and is defined as a depression that develops when one spends a great amount of time on social media sites, such as Facebook, and then exhibits classic symptoms of depression (O’Keeffe & Clarke-Pearson, 2011). Facebook depression is one of the many “iDisorders” that have been coined in the past couple of years, linking technology usage with psychological health. Extensive research documents the relationship between depression and excessive texting, video gaming, e-mailing, listening to music, and other media uses (Rosen, 2013).

### **Positive Uses of Social Media**

In spite of the many harmful effects of social media, it has many positive uses as well. If one wants to look for a job, network a business, recruit employees, or keep in touch with former colleagues, then LinkedIn is an excellent resource. Facebook and Twitter, while different in their approach, allow the user to stay connected with friends and family, keep up with news and entertainment, and connect with various interest groups. For those who desire to showcase their creativity, Instagram, YouTube, and Pinterest provide perfect outlets.

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While each individual has his or her own social media preferences, research shows that the main reason people use social media is to stay connected with their friends. Research by Smith (2011) indicates that 71% of 18-29 year olds use social media to stay in touch with current friends, and 53% use social media to connect with friends from their past.

While relationships are important at any age, the research involving young adults and social media proves how important staying connected is for this age group. Thompson & Lougheed (2012) report that 80.24% of undergraduates claim that Facebook is a part of their everyday lives. They also report that undergraduates spend almost two hours per day on social networking sites. Additionally, Duggan & Brenner (2012) found that young adults make up the highest percentage of all age groups using social media sites. Specifically, young adults are more likely to use Twitter (27%), Pinterest (19%), Instagram (28%), Tumblr (13%), and Facebook (86%) than any other age bracket. These findings show that social media plays a huge part in the young adult's life, and that connecting through social media is highly valued.

### **Summary**

Social media has changed the way young adults interact with one another. Young adults today have the opportunity to stay connected through words, photos, and video more than any other generation. The review of the literature shows how technology has evolved since the 1940s, specifically how technology has become more social and interactive.

As technology has become more social, concerns have arisen about how young adults interact with different forms of social media and what impact it has on their relationships. The research shows that young adults are more deceptive through social media than in face-to-face communication. The limited research for young adults engaging in cyberbullying, sexting, and narcissism shows that the effects of these behaviors can be very harmful. Social media gives the

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opportunity to display offensive behavior in an anonymous or straight-forward way. Rainie, Lenhart, & Smith (2012) state that 49% of adults have witnessed mean and offensive behavior on social networking sites.

For young adults transitioning from high school to college, a negative interaction with social media could serve as one more factor causing them stress and anxiety. Exposure to too much social media can also affect their mental health. A pressing need exists to educate this age group in how to use social media in an intelligent and healthy way, as well as to recognize signs of abuse.

In addition, the review of the literature showed that young adults use social media more than any other age group, and the main reason for this is staying in touch with their current friends. As social media becomes inseparable from the daily lives of young adults, they need to understand how they interact with their friends online compared with their face-to-face interactions. Authentic, healthy relationships happen when one behaves consistently both online and offline. This study will explore how young adults' online behaviors differ from their face-to-face interactions.

### **Chapter 3: Methodology**

#### **Rationale for the Method**

The research used in this study is quantitative and non-experimental. Christensen and Johnson (2008) define non-experimental research as research in which the researcher does not manipulate the independent variable or randomly assign subjects to groups. In this research, two universities were chosen to have their undergraduates participate in the surveys. One type of non-experimental research used in this study is causal-comparative research. This causal-

comparative research examines the relationship between one or more categorical independent variables (male and female young adults) and one or more quantitative dependent variables.

### **Population of the Study**

The population of this study consists of two private universities in the Midwest. Both universities have approximately 3,000 undergraduate students and have a religious affiliation. The results of this study may be applicable to small, religiously affiliated, private universities across the United States.

### **Rationale for the Population**

This research focuses on young adults. Young adults fall into the age bracket of 18-39 years old. The rationale behind choosing universities for this research was the level of convenience as well as the fact that undergraduate students have the highest rate of social media use than any other age bracket (Hampton, 2011). The two universities chosen for this research resulted from convenience sampling. Christensen and Johnson (2008) define convenience sampling as people who are available, willing, and easy to recruit. Six universities were contacted and asked to be a part of this study. Of the six universities contacted, two were willing to allow their undergraduates to be recruited for the research.

### **Description of the Sample**

A total of 1,365 undergraduate students, from two different universities, participated in the research. The ethnicity and academic major of each undergraduate student that participated in the study is unknown. The total number of female respondents was 884 (64.76%) and the total number of male respondents was 481 (35.24%).

### **Methods of Sampling**

Each university was contacted via e-mail. The Institutional Review Board from each university gave permission for a mass e-mail to be sent to all their undergraduate students. The e-mail to the students included a brief description of the research (see Appendix A), as well as a link to Survey Monkey, which would collect the data. The undergraduate students were aware that participation in the research was strictly voluntary.

### **Procedure**

#### **Instruments**

The instrument used in this study was a survey designed on Survey Monkey (<http://www.surveymonkey.com>). The survey consisted of two categorical questions, one multiple choice question, and eight questions with answers to be chosen based upon a 4 point Likert response scale (See Appendix B).

#### **Data Collection Methods**

The survey was first given via paper and pencil to a group of 10 young adults in a pilot study. As a result of the pilot study, no changes needed to be made to the original survey. The survey about social media was the only method of data collection. Undergraduate students answered the survey via Survey Monkey, Survey Monkey collected the data, and the results were analyzed via Microsoft Excel.

#### **Relevant Ethical Considerations**

The research and survey were both approved by each university's Institutional Review Board. The survey was voluntary and anonymous. Each participant was over 18 years old, thus researchers did not need consent forms for students to participate in the survey.

### **Methods of Data Analysis**

The methods of data analysis used in the research are descriptive and inferential statistics. Descriptive statistics were used to organize and summarize the results of the social media survey. Frequency and measures of central tendency pertaining to the data were discussed. Inferential statistics were used when analyzing the Likert-based questions from the survey. Using the data from the survey, the researcher determined what category the young adults fall into (agree/disagree, strongly disagree/strongly agree). The researcher used the chi square test to analyze the results.

## **Chapter 4: Results**

### **Descriptive & Inferential Results**

For the first question of the survey (See Appendix A), the respondents had to answer the categorical question of whether they were male or female. A total of 481 males and 884 females participated in the survey, making the sample size equal to 1,365 undergraduate students.

For the second question of the survey, the respondents had to type in their age. Eleven respondents skipped the question and six did not answer the question with an appropriate response. A total of 1,348 undergraduate students filled in their age with an appropriate response. The undergraduate students surveyed had a large age range, from 18 years old to 69 years old. The age bracket with the most participants (65%) was 18-25 year olds. See Table 1 for the demographic characteristics in regards to the age of the survey participants. The average age of the undergraduate students was 28.1 (SD = 12.24). For females, the average age was 28.11 (SD = 12.20) and for males the average age was 28.69 (SD = 12.33).

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Table 1

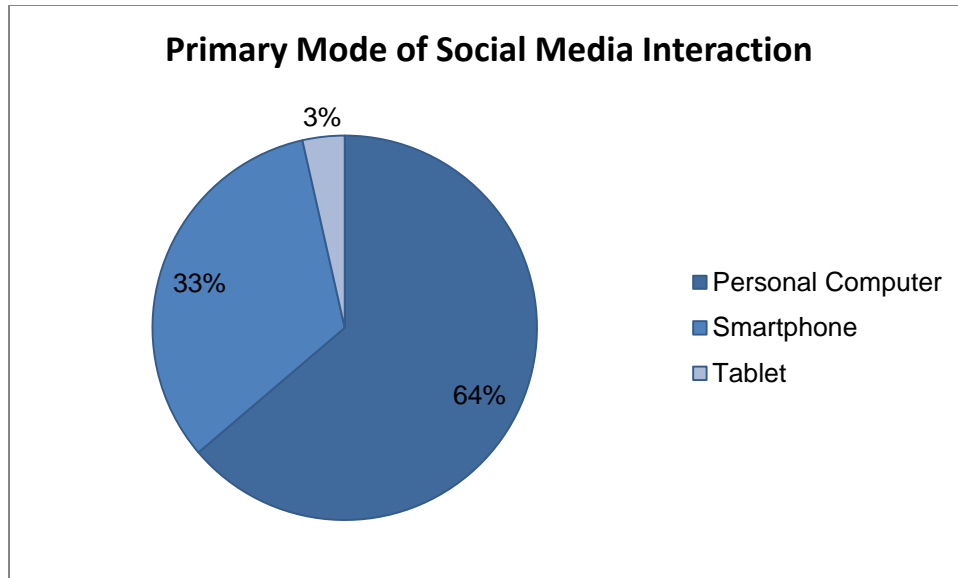
*Demographic Characteristics of Participants* (N = 1,365)

Characteristic	Male	Female	%
Age at time of survey (years)			
18-25	289	582	65
26-33	43	66	8
34-41	50	79	10
42-49	41	71	8
50-57	35	56	7
58-65	14	17	2
66-73	2	3	0.4

*Note.* Totals of percentages are not 100 because of rounding.

In this survey, the participants were asked to choose their primary mode of interaction with social media: a smartphone, tablet, or a personal computer. Most undergraduates selected personal computer (PC) as their primary mode of interaction with social media (64%). See Figure 2.

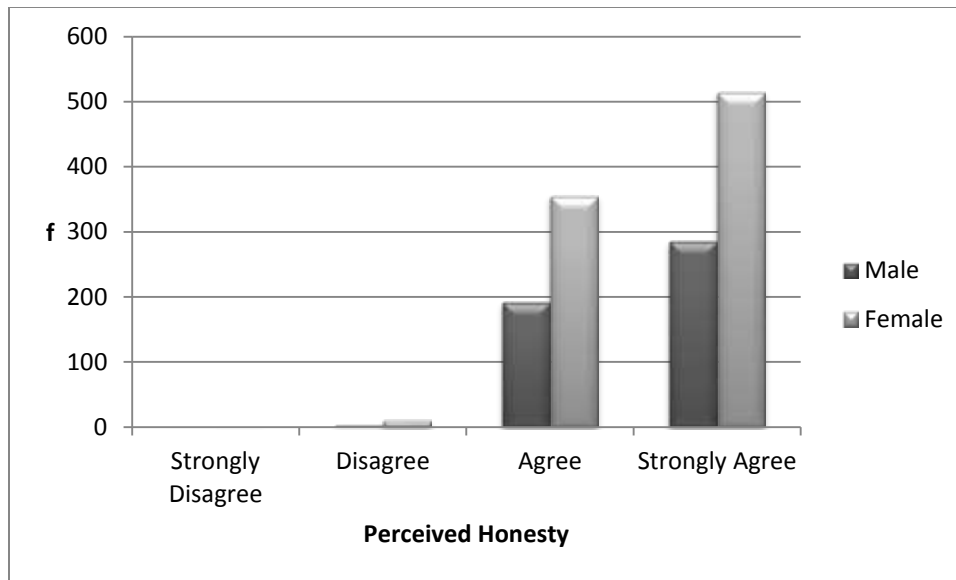




*Figure 2.* Primary Mode of Social Media Interaction Among Undergraduate Students.

The participants were asked if they considered themselves to be honest people. Out of the 1,365 undergraduates that participated, 3 skipped the question. See Figure 3 for the frequency of gender and how the undergraduate students perceived themselves in regards to honesty.

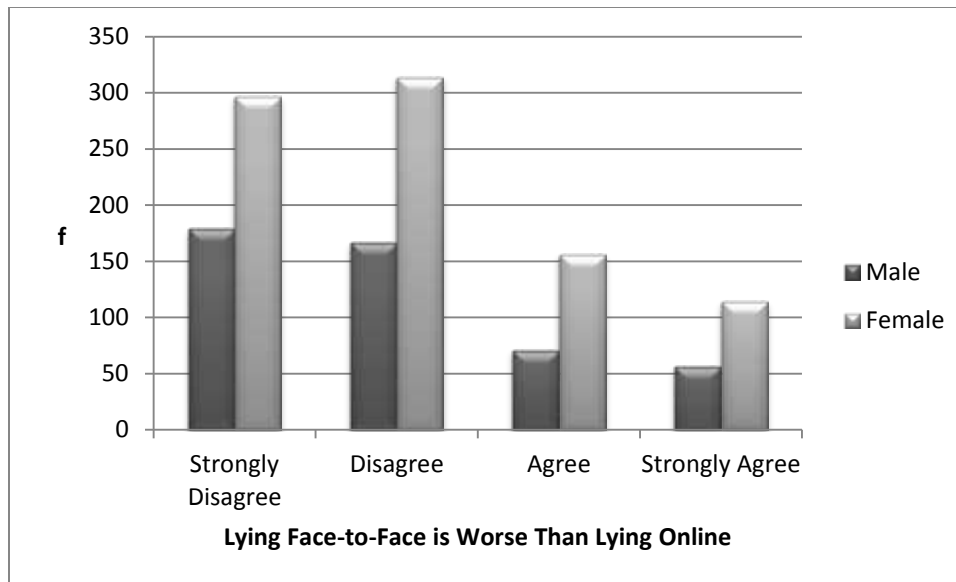
## FACE-TO-FACE INTERACTIONS AND ONLINE BEHAVIOR



*Figure 3.* Frequency of Gender and Perceived Honesty of Undergraduate Students.

The result of a chi square test of independence on perceived honesty of males and females was:  $\chi^2(1, N=1362) = 1.19$ . This result was not significant. Question 6 on the survey asked the respondents to choose a response to: “telling a lie in a face-to-face encounter is worse than telling a lie online.” See Figure 4.

## FACE-TO-FACE INTERACTIONS AND ONLINE BEHAVIOR



*Figure 4.* Frequency of Lying Face-to-Face vs. Lying Online of Undergraduate Students.

The question of whether a person considers himself to be honest (survey question number 5) was then compared with whether or not a person considers lying face-to-face worse than telling a lie online (survey question number 6). Seven males skipped question 5 or 6 (N=474) and 6 females skipped question 5 or 6 (N= 878). This behavior was compared first with males, and then with the females. The results were not significant for both groups. See Table 2.

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Table 2

*Perceived Honesty Compared With Lying Face-to-Face or Online* (N=1362, 1355 for #5,6)

Characteristic	#5 SA/A	#5 SD/D	#5 SA/A	#5 SD/D	$\chi^2(1)$
	#6 SA/A	#6 SA/A	#6 SD/D	#6 SD/D	
Gender					
Female	265	4	602	7	0.17
Male	128	0	343	3	1.12

*Note.* SA=strongly agree; A = agree; SD = strongly disagree; D = disagree.

The question of whether a person would say mean things to or about a person in a face-to-face encounter (survey question 7) was compared with the question of whether a person would say mean things to or about a person through social media (survey question 8). Five males skipped question 7 or 8 (N=476) and eight females skipped question 7 or 8 (N=876). This behavior was compared first with females, and then with males. The results were significant for both groups. See Table 3.

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Table 3

*Verbal Mean Behavior Face-to-Face vs. Verbal Mean Behavior Online (N=1356, 1358 for #7,8)*

Characteristic	#7 SA/A	#7 SD/D	#7 SA/A	#7 SD/D	$\chi^2(1)$
	#8 SA/A	#8 SA/A	#8 SD/D	#8 SD/D	
<b>Gender</b>					
Female	83	48	84	297	195.9
Male	43	18	58	357	101.7

*Note.* SA=strongly agree; A = agree; SD = strongly disagree; D = disagree.

The question of whether a person is more flirtatious through social media than face-to-face (survey question 9) was compared to whether the respondents thought they represented themselves the same online as in the real world (survey question 10). Seven males skipped question 9 or 10 (N=474) and ten females skipped question 9 or 10 (N=874). The behavior was first compared with females, and then with males. The results were significant for both groups. See Table 4.

Table 4

*Flirtatious Behavior Online Versus Perceived Online Behavior (N=1356, 1355 for #9,10)*

Characteristic	#9 SA/A	#9 SD/D	#9 SA/A	#9 SD/D	$\chi^2(1)$
	#10 SA/A	#10 SA/A	#10 SD/D	#10 SD/D	
<b>Gender</b>					
Female	212	606	22	34	4.78
Male	95	325	28	26	21.29

*Note.* SA=strongly agree; A = agree; SD = strongly disagree; D = disagree.

Question 10 of the survey asked the respondents to choose how strongly they felt that they represented themselves the same online as they do in the real world. Ten respondents skipped the question (N=1,355). See Figure 5.

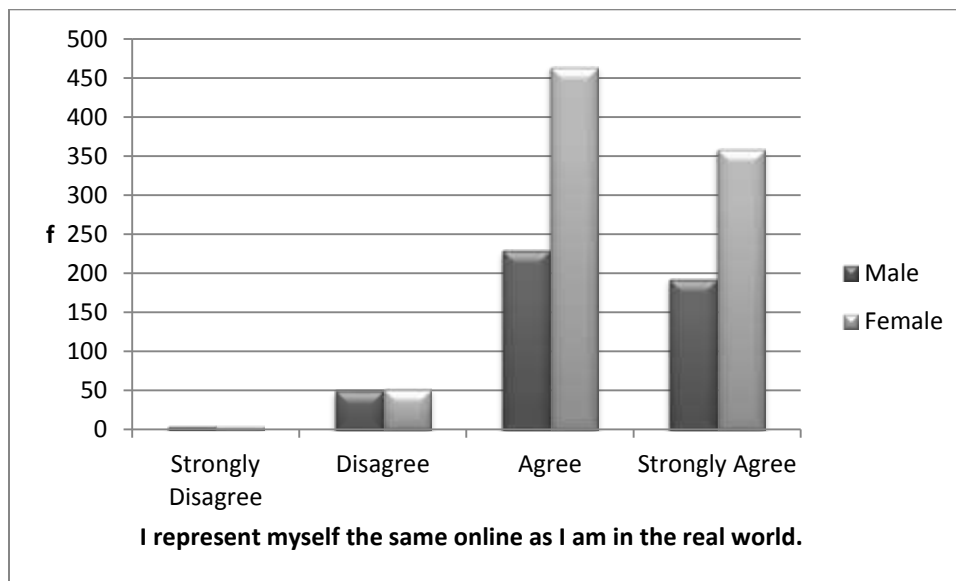


Figure 5. Frequency of responses to survey question ten.

## FACE-TO-FACE INTERACTIONS AND ONLINE BEHAVIOR

Question 11 of the survey asked the respondents to choose a response to the statement: “I am more outgoing about my faith online than I am in person.” Seven respondents skipped the question (N=1,358). See Figure 6.

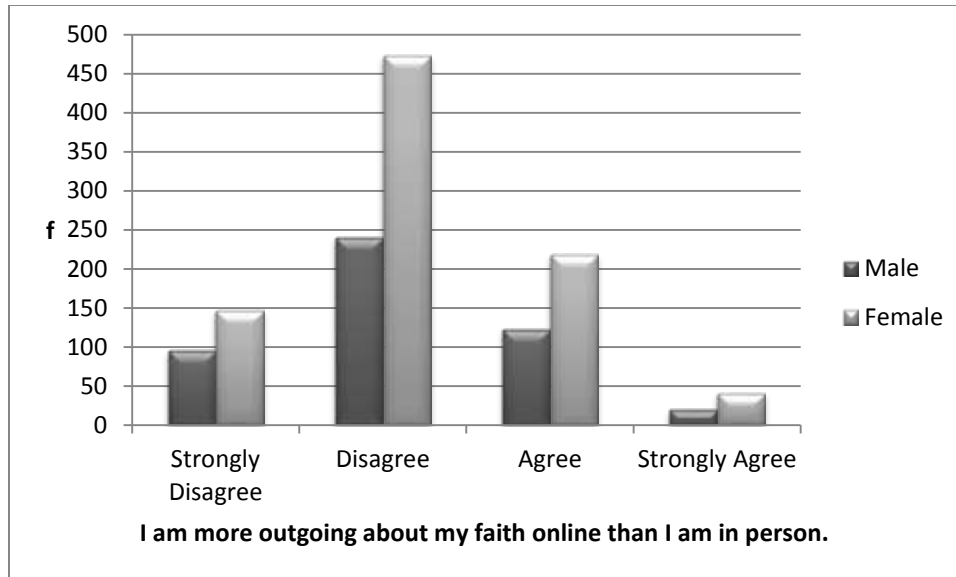


Figure 6. Frequency of responses to survey question eleven.

### Improvements

The average number of students who skipped a question in the survey was 7.5. Survey Monkey gave the option to have respondents choose an answer before moving onto the next question. Utilizing this choice would have forced the respondents to answer the survey in its entirety. Improvements for a future survey would also include having the respondents choose an age bracket that they belong to, rather than typing in their age. This would allow for researchers to compare age groups with the data.

## Chapter 5: Summary

### Interpretation of Results

The combined total of males and females at the two universities that participated in the study was 1,365 undergraduate students. The typical undergraduate student has just graduated from high school and is between the ages of 18 – 25 years old. The majority of participants (65%) in this study fell into that category. One of the universities surveyed tended to have a higher percentage of older undergraduate students at the time of year that the survey was conducted. This accounts for the higher age brackets represented.

The goal of this research is to determine if young adults act differently online than they do in face-to-face interactions. If a person perceives himself to be an honest person then his actions online should be the same as his face-to-face interactions. The majority of respondents considered themselves to be honest people. Only 1% or less did not consider themselves to be honest people.

Survey question number six stated the following: “telling a lie in a face-to-face encounter is worse than telling a lie online.” An honest person would disagree with this statement, because telling a lie is bad whether it is online or face-to-face. Seventy-one percent of the undergraduate students considered themselves to be honest, and disagreed or strongly disagreed with survey question number six. When running a chi square test on the male and female responses to whether a person considers himself to be honest and whether or not a person considers lying face-to-face worse than lying online, the results were not significant. These results prove true the hypothesis that honesty is not dependent upon gender.



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Survey question number seven stated the following: I would say mean things TO or ABOUT a person in a face-to-face encounter. The majority of respondents (80%) strongly disagreed or disagreed with that statement. Eighty percent of the undergraduates would not say mean things to or about a person in a face-to-face encounter. An honest person should then answer survey question number eight in the same manner. They should disagree that they would say mean things TO or ABOUT a person through social media. The results show that 86% would not say mean things to or about a person through social media. The results of a chi square test comparing gender and survey questions seven and eight proved significant.

How the respondents answered survey questions seven and eight can be found in Table 3. Females were twice as likely as males to say mean things to a person in a face-to-face encounter and also to say mean things through social media. Likewise, females were also almost three times as likely as males to not say mean things face-to-face, yet admit to saying mean things through social media.

Survey question number ten states: "I represent myself the same online as I am in the real world." Ninety-two percent of the undergraduate students agreed with statement ten. Survey question number nine states: I am more flirtatious through social media than I am in a face-to-face encounter. Seventy-four percent of the respondents disagreed with the statement while 26% of the respondents agreed with the statement. When comparing the answers of survey question 9 and 10 the results are inconsistent. A chi square test comparing gender and survey questions 9 and 10 shows that the results are significant. This proves true the hypothesis that young adults act differently on-line than they do in person. When comparing males and females, 25.7% of males admitted to being more flirtatious online, as opposed to 26.9% of females.

## FACE-TO-FACE INTERACTIONS AND ONLINE BEHAVIOR

Survey question eleven states: “I am more outgoing about my faith online than I am in person.” If a person represents himself the same online as he does in person then he would answer question eleven either as “strongly disagree” or “disagree.” Seventy percent of the respondents answered “strongly disagree” or “disagree.” This means that thirty percent of the students act differently online in regards to their faith than in person.

### **Relation of the Results to Literature**

Previous research shows that the main reason young adults use social media is to maintain their current relationships (Smith, 2011). The behavior that young adults display through social media towards their friends and acquaintances is cause for concern for those who interact with young adults on a regular basis (educators, family, and employers).

Mean behavior, such as cyberbullying, is happening at the undergraduate level. Snell & Englander (2010) found that females are more often involved in cyberbullying as victims and as perpetrators. In this current research, more females (15%) admitted to saying mean things to or about a person through social media than males (13%).

Sexting via social media is also occurring at the undergraduate level. Benotsch et al. (2013) previously reported that 44% of the young adults surveyed admitted engaging in sexting. This current study revealed that both males and females (26% and 27%) are more flirtatious through social media than they are face-to-face. Young adults are willing to say things through social media that they might not say in a face-to-face encounter.

In this current study, 99% of the undergraduates considered themselves to be honest people. However, while the majority of undergraduates claimed to be honest, their actions online did not match up with their actions face-to-face. This research showed that 14% would say mean things on social media, which differs from the 20% that said they would say mean things face-to-

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face. Twenty-six percent of the undergraduates said they are more flirtatious through social media, and 8% admitted to not representing themselves the same online as they do in person. Previous research (Zimbler & Feldman (2011); Whitty et al. (2011); Whitty & Carville (2008)) reported that young adults are more likely to deceive via social media than through face-to-face interactions.

### **Biblical Integration**

Social media is changing the way people spend their time, in addition to changing how communication with friends occurs. Social media is an ever growing presence in the lives of young adults. One question that Christian young people need to ask whenever they interact with social media is: “How can we use biblical discernment in the way we use social media (MacArthur, 2010)?” One way to use biblical discernment in social media is to do a heart check before posting, tweeting, or commenting on a social media site. This can be done by asking the following question: “Is what I am about to post giving glory to God or to myself?”

Gentile et al. (2012) states that, despite the name “social networks,” a lot of user activity is self-focused on social media sites. Young people today even admit that their generation is the most narcissistic generation to date, and that social media has contributed to their narcissism (Jayson, 2009). Narcissism can also be linked to self-promotion. This can occur via social media when users focus on getting people to read, listen to, or watch what is posted and on wanting people to think they are great (i.e. “like” a post on Facebook). Naaman, Boase, and Lai (2010) reported that 80% of Twitter users tweeted about themselves and their thoughts, feelings and accomplishments. They coined these people “meformers.” Only 20% of those in the study tweeted information about others. They coined these people “informers.”

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This “me-centered world” of social media clearly stands in opposition to the characteristics that the Bible states every believer should have: humility and selflessness. While the world might label people “narcissists” or “meformers” for the behavior displayed on social media, the Bible calls this behavior pride.

Below are just a few of the Scripture passages that relate to this topic:

**Colossians 3:12-** Put on then, as God's chosen ones, holy and beloved, compassionate hearts, kindness, humility, meekness, and patience.

**1 Peter 5:5-** Clothe yourselves, all of you, with humility toward one another, for “God opposes the proud but gives grace to the humble.”

**Philippians 2:3-** Do nothing from selfish ambition or conceit, but in humility count others more significant than yourselves.

**Proverbs 27:2-** Let another praise you, and not your own mouth; a stranger, and not your own lips.

**Proverbs 16:18-** Pride goes before destruction, and a haughty spirit before a fall.

**Isaiah 66:2-** But this is the one to whom I will look: he who is humble and contrite in spirit and trembles at my word.

**Matthew 23:12-** Whoever exalts himself will be humbled, and whoever humbles himself will be exalted.

Believers in Christ are called to live lives of humility. Every word that a Christian speaks or writes should honor God.

Furthermore, one can use biblical discernment when interacting with social media by remembering that everyone will one day give an account for every word that they speak (Matthew 12:36). Statistics show that over half a million comments are posted on Facebook every single minute. Twitter users generate 120,000 tweets each minute. Additionally, on Facebook, people post over 290,000 status updates and upload nearly 140,000 photos per minute

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(Flacy, 2011). The potential for gossip, slander, self-promotion, and the exchange of careless words over these social media sites is high. Believers in Christ are called to use their words to honor God.

Just a few of the relevant passages of Scripture are listed below:

**Ephesians 4:29** - Let no corrupting talk come out of your mouths, but only such as is good for building up, as fits the occasion, that it may give grace to those who hear.

**Proverbs 10:18 & 19**- Whoever utters slander is a fool. When words are many, transgression is not lacking, but whoever restrains his lips is prudent.

**Psalms 34:13** - Keep your tongue from evil and your lips from speaking deceit.

**Proverbs 13:3** - Whoever guards his mouth preserves his life; he who opens wide his lips comes to ruin.

**Psalms 19:14** - Let the words of my mouth and the meditation of my heart be acceptable in your sight, O LORD, my rock and my redeemer.

John MacArthur (2010) states that although tweeting about the inane details of life may not be sinful, if it does not build others up spiritually, it might be better left unsaid. With their words, pictures, and videos, Christians have a chance to point their “friends” either to themselves or to God and His Word.

A third way of using biblical discernment when interacting with social media involves asking if the activity is the best use of time. Pastor and blogger Tim Challies (2011) challenges believers to ask themselves if they own technology, or if technology owns them. He writes that one can find a quick answer to that question by asking someone who sees you on a regular basis if he or she thinks that you are on your phone (or computer) too much.

According to Go-Gulf Technologies (2012), Americans spend 32 hours per month on the Internet and 22% of that time is spent on social networking sites. Facebook users spend an

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average of 7 hours, 45 minutes, and 49 seconds per month on the site. A study by Thompson & Lougheed (2012) revealed that undergraduates spend three and a half hours per day on the Internet, and almost two of those hours are spent on social networking sites. When a young adult lacks good time management skills, then addiction and obsession can creep in slowly and take over without them even realizing what is happening.

Previous research shows that between 8 and 50 percent of college students display problems consistent with Internet addiction (Kittenger et al., 2012). While the majority of undergraduates access the Internet via a personal computer, the invention of the smartphone has enabled easy access to the Internet at any time or place. Because of this, smartphones are not helping to alleviate addiction problems. A Mobile Mindset Study (Lockout Mobile Security, 2012) found that 68% of young adults do not go even one hour without checking their phones. Fifty-four percent of young adults check their phones while lying in bed, 39% check them while using the bathroom, and 30% check them while dining with others. Young adults who follow Christ need to demonstrate a healthy relationship with technology, so that a watching world can clearly see that Christ, not a smartphone, takes priority in their lives.

Moreover, young adults need to check their hearts, as well as the clock, to determine if they are using their time wisely. Social media can become a massive distraction and waste of time. Young adults should remember Ephesians 5:15-16 which states, “Look carefully then how you walk, not as unwise but as wise, making the best use of the time, because the days are evil.”

As the research has demonstrated, social media can also cause one to fall into a trap of self-promotion and the tweeting or posting of careless words. However, despite the negative behavior that can result from social media, it can also be very beneficial in the life of the believer. John Piper (2009) writes that, while social media can be bad for a person, instead of

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boycotting it, believers should try to fill all avenues of social media with as much reasonable, Bible-saturated, prayerful, relational, Christ-exalting, and truth-driven statements as they can.

In this research, 30% of undergraduate students reported that they are more outgoing about their faith online than in person. Social media can provide an avenue for sharing ones faith online, especially for a person who, has reservations about sharing his faith face-to-face.

Research has shown that Christians are increasingly turning to social media to share their faith.

In a survey on attitudes about online mission by Christian Vision and Premier Christian Media (Christian Today, 2012), 84% of the 700 Christians surveyed agreed that the online realm represents a huge mission field. More than two-thirds (71%) of the respondents said that they post links to Christian sites, and 73% said that they intentionally post or link to content in order to share their faith. Sixty-four percent of the respondents said that they intentionally use social networks like Facebook, YouTube, and Twitter to share their faith. Social media can provide a wonderful avenue to share the gospel of Jesus Christ.

Social media can also serve as a great way to get the Word of God into the hands of unbelievers or to aide in studying the Bible for believers. Hundreds of Bible apps are available for smartphone users. A person can read a verse in one translation and then swipe to a different version in a matter of seconds. Cross-referencing, commentaries, and original meanings of words are also available to aide in Bible study, all within ones phone. A person can post a passage of Scripture to his or her Facebook wall or Twitter feed in a matter of seconds. Young adults have many ways to spread the Word of God using social media.

Additionally, social media also provides the local church, as well as believers around the world, with the opportunity to communicate and be connected. One can follow a missionary from his or her church via a blog, Facebook, or Twitter. A decade ago, missionaries located in

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remote parts of the world could feel very disconnected from those who supported them. Social media gives missionaries the opportunity for other believers to see, hear, and read about their lives daily, if they are connected to the Internet.

Social media can also allow the local church to communicate more effectively. Youth groups, children's ministries, mission groups, etc., can have a place to dialogue and release information quickly, as well as save in the cost of printing information.

Likewise, prayer chains can inform praying believers of the needs within the body of Christ. Previously, these worked through phone chains, which often experienced delays when members were not at home. Now, however, Facebook and texting have allowed prayer requests to get to as many people as possible in a short amount of time. Updates on surgeries, pictures of new born babies, and other concerns within the body of Christ can now spread much more quickly with social media.

Finally, social media allows friends both far and near, to stay connected. For young adults, this is the main reason they use social media (Smith, 2011). For Christian young adults, social media serve as a wonderful tool for encouraging each other to press on in their walks with Christ. When used appropriately, it can allow for authentic relationships among friends and can even draw them closer to Christ as they live life together through social media.

Believers must be cautious in how they interact with social media. Ultimately, every Christian needs to check his or her heart for the right motives before he or she posts anything for the watching world to view.

### **Strengths of the Study**

When compared with other studies of undergraduate students, this research had a large sample size. The researcher chose the universities, but those who participated in the study did so



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willingly and anonymously. The findings in this study may also be applicable to undergraduate students that attend other private, religiously affiliated institutions. While other studies specifically focused on cyberbullying, sexting, narcissism, or lying among undergraduate students, this is the first study to examine the undergraduates' behavior online and compare it to their face-to-face interactions. This study is very relevant to the lives of undergraduates, because the research shows that this age group uses social media more than any other (Duggan & Brenner, 2013). The results of this study may benefit undergraduate students who think they behave consistently online and offline, while in reality, their actions show otherwise.

### **Limitations**

One limitation in this study is that there were more females (65%) who participated in the study than males (35%). Having close to the same number of males and females would be helpful in order to compare their responses relatively. Another limitation was that this study, while focusing on undergraduate students, was not limited to a specific age bracket. Thirty-five percent of the undergraduates fell into an age bracket greater than the typical undergraduate student (age 18-25 years old). A more concrete age group may show different results.

### **Suggestions for Future Research**

The ages of the undergraduate students in this research spanned a large age range. One suggestion for future research with undergraduates would be limiting the age range to 18-25 year olds. Narrowing the age bracket would allow the results to be more specific. Another suggestion for future research would be to compare the older undergraduate age category with the younger undergraduate age category.

This study was limited to two private universities in the Midwest. Comparing smaller, private universities in different geographical regions would be beneficial. One question on the

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survey asked if the participants felt that they were outgoing. A suggestion for future research would be to use this data to compare introverts and extroverts and how they perceive themselves as well as compare it to past research.

Despite these limitations, this survey provided needed information on the important topic of social media use among undergraduates. Future research can expand this understanding as it examines additional variables and includes a greater number of participants.

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# FACE-TO-FACE INTERACTIONS AND ONLINE BEHAVIOR

## APPENDIX A

### COPY OF E-MAIL SENT TO UNDERGRADUATE STUDENTS

April 2013

Dear Undergraduate Student,

My name is Andrea Caldwell and I am a graduate student at Cedarville University. I am hoping you will take less than 5 minutes right now to complete a survey via Survey Monkey about social media: <https://www.surveymonkey.com/s/BHLTWN9>

My final graduate research project is entitled: An exploration of young adult's online behavior versus their face-to-face interactions. The survey is 11 questions. You must be at least 18 years old to participate. This survey will close on May 1, 2013.

I thank you in advance for your time and participation. Please feel free to contact me if you have any questions.

Blessings,

Andrea Caldwell  
[acaldwell176@cedarville.edu](mailto:acaldwell176@cedarville.edu)

## APPENDIX B

## FACE-TO-FACE INTERACTIONS AND ONLINE BEHAVIOR

### SOCIAL MEDIA SURVEY

1. Are you male or female?  
Male                      Female
2. Please state your age.
3. What is your primary mode of interaction with social media (Facebook, Pinterest, Instagram, etc.)?  
Smartphone                      Tablet                      PC
4. I am an outgoing person.  
Strongly Disagree                      Disagree                      Agree                      Strongly Agree
5. I consider myself an honest person.  
Strongly Disagree                      Disagree                      Agree                      Strongly Agree
6. Telling a lie in a face-to-face encounter is worse than telling a lie online (texting, Facebook, etc.).  
Strongly Disagree                      Disagree                      Agree                      Strongly Agree
7. I would say mean things TO or ABOUT a person in a face-to-face encounter.  
Strongly Disagree                      Disagree                      Agree                      Strongly Agree
8. I would say mean things TO or ABOUT a person through social media (texting, Facebook, etc.).  
Strongly Disagree                      Disagree                      Agree                      Strongly Agree
9. I am more flirtatious through social media (texting, Facebook, etc.) than I am in a face-to-face encounter.  
Strongly Disagree                      Disagree                      Agree                      Strongly Agree
10. I represent myself the same online as I am in the real world.  
Strongly Disagree                      Disagree                      Agree                      Strongly Agree
11. I am more outgoing about my faith online than I am in person.  
Strongly Disagree                      Disagree                      Agree                      Strongly Agree